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January 2020

ARMY COMMUNICATOR

Voice of the Signal Regiment

ENLISTED MOS CONVERGENCE

Plus:

- ***Network Prototypes***
- ***Know Your Tech***
- ***Signal Spotlight***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

Contents

The Army Communicator is published as a command information e-publication for the men and women of the United States Army Signal Corps under the provisions of AR 360-1.

Opinions expressed herein do not necessarily reflect the views of Office, Chief of Signal, the US Army or the Department of Defense.

Submit articles, photos, graphics, videos, story ideas, and nominations for "Signal Spotlight" to the editor here. For additional information, please call (706) 791-7384.

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On the Cover

The Signal Enlisted MOS Convergence is building to a more streamlined and efficient Regiment. Cover by Billy Cheney.

Chief of Signal Regimental Team

Happy New Year and welcome back to another edition of the Communicator. While this past year was full of exciting changes for the Signal Regiment, this New Year is headed on the same path. With a new year comes new goals and new challenges we are ready to tackle!

Our top three priorities remain to optimize the signal branch career fields, reshape the signal force structure and modernize the training environment. Priority 1 is all about our people. This year we expect to get approval for MOS Convergence Phase II. This will officially bring our MOSs from 17 down to 7. Priority 2 focuses on our structure as a whole allowing the regiment to better support the warfighter.

This year we will finalize our plans to fill all identified gaps and prepare the force for the changes. Our last priority is what keeps us current. This includes keeping up with emerging technology as well as ensuring our physical training areas are conducive to our needs.

One major step forward you will see this year is the incorporation of NCOs and warrant officers into our combined brigade and battalion S6 course. This will allow all S6 leadership to understand their roles and responsibilities. With all these changes, we feel it vital to keep the regiment informed so we will now be publishing the Communicator monthly.

This year will be fast and furious. We hope you all are as excited for it as we are! We will continue to work for you every single day and cannot thank you enough for what you do. Take every day as a new challenge and continue to build solutions. Remember, we are interested in what you and your Soldiers are doing every day for the Regiment. If you would like to submit an article or photographs for the next edition, please contact us.

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An enlisted leader set an example for the entire Signal Regiment when Sgt. Maj. W. Wesley Stollings, noncommissioned officer in charge of operations for the 11th Theater Tactical Signal Brigade, completed the Army Combat Fitness Test with a score of 600, making him the first Signal Soldier and third Soldier overall to earn a perfect score on the test.

While he's proud of his accomplishment, Stollings believes the important takeaway is that if he, at age 42, can earn a perfect score, than no Soldier should have an excuse not to pass.

"Most Soldiers are closer than they think to passing or excelling on the test," he said.

According to the Army, the ACFT, "will better connect fitness with combat readiness for all Soldiers, improve Soldier and unit readiness, transform the Army's fitness culture, reduce preventable injuries and attrition, and enhance mental toughness and stamina." It replaces the traditional pushup, sit-up, and run format with a series of exercises designed to simulate the physical requirements Soldiers may have to face in actual combat situations.

"The primary difference between the ACFT and the APFT is the fact that you can't 'prepare for the test,'" Stollings said. "Honestly, I was never a true believer in the old test, as a measurement of fitness. I have always attempted to stay well rounded as an athlete, and I feel like the ACFT measures more components of fitness."

In addition to running, the ACFT also includes hand release push-up; deadlift; standing power throw; sprint, drag, and carry; and leg tuck events.

"Admittedly, because maxing all other events seemed obtainable, I ran a little more than I normally would have," Stollings said. "Oddly enough, the push-ups and the run (the only two carry over events) are the two events that I have to focus on the most."

According to Stollings, the change from the previous physical fitness test to the ACFT, while intimidating to some, is better for individual Soldier's morale.

"I can't remember Soldiers being excited for an APFT, but Soldiers are genuinely happy once they complete the ACFT," he said. "There's a sense of accomplishment and pride, and a rejuvenated push towards being Soldier Athletes in general."

Sgt. Maj. W. Wesley Stollings, noncommissioned officer in charge of operations for the 11th Theater Tactical Signal Brigade, completed the ACFT with a perfect score, something only a handful of Soldiers have been able to accomplish.
Photo by Spc. Iesha Little

At-the-halt network prototypes increase mobility, computing power

Amy Walker
PEO C3T/PM Tactical Network

The Army recently equipped the 1st Armored Brigade Combat Team, 3rd Infantry Division with modular, more expeditionary and capable at-the-halt tactical network prototypes.

The pilot effort, known as the 5th Generation Technical Insertion (5th Gen TI), is part of the Army's Tactical Network Transport At The Halt (TNT ATH) Modernization in Service (MIS) efforts, which are helping to establish more capable and unified network transport throughout the service. The unit will use the systems during training exercises and provide feedback to inform design, functionality and basis of issue decisions on the eventual equipment refresh of the legacy at-the-halt systems in use across the force.

The new network enhancements significantly reduce size, weight, power and setup time for increased mobility. They are also easier to operate and maintain, and provide a more than 200 percent increase in computing power. These benefits are derived from new commercial-off-the-shelf hardware, software and virtualization technologies.

"It's all about taking hardware and making it software; that means less physical equipment and more virtual machines, more software-based infrastructure," said Maj. Tomas Allen, communications officer (S-6) for 1st ABCT, 3rd ID. "These improvements are expected to provide a more expeditionary upper tactical internet, which enhances the movement and maneuver of elements and organizations on the ground."

Project Manager Tactical Network delivered "prototype" Tactical Network Transport At The Halt upgrade equipment to the 1st Armored Brigade Combat Team, 3rd Infantry Division, in September 2019, at Fort Stewart, Georgia. This equipment will support a pilot that will inform the next equipment refresh for the Army's legacy at-the-halt equipment. Photo by Tony Soto

The 5th Gen TI equipment package includes modernized Joint Network Nodes (JNNs) found at brigade echelons, Command Post Nodes (CPNs) found at battalion and lower echelons, and user access cases and software-based virtual server stacks.

"The significantly increased computing power provided by these new systems enables more Soldiers to conduct mission command and exchange more data, faster and at the same time, without lag in the network," said Cpt. Ryan

Nehus, assistant product manager for Mission Network, at Project Manager (PM) Tactical Network. “The technology increases network efficiency, so we can accomplish more with the same amount of bandwidth.”

PM Tactical Network, assigned to the Program Executive Office for Command, Control and Communications-Tactical (PEO C3T), completed equipping and training the unit with these capabilities in late September, at Fort Stewart, Georgia. The unit will employ and evaluate the prototype equipment during multiple training exercises through November 2019, at Fort Stewart, and then during its training rotation at the National Training Center at Fort Irwin, California, in January 2020. PM Tactical Network plans to begin the technical insertion in late fiscal year 2020, which will refresh units with obsolete at-the-halt network equipment.

“The 5th Gen Technical Insertion implements a standards-based architecture with virtualization technologies that provide space for application expansion, which enables us to easily integrate new capabilities going forward,” Nehus said. “So not only are we improving and refreshing current at-the-halt network transport equipment that is nearing end of life, we are also taking steps and laying the groundwork for future network modernization efforts.”

The advanced virtualization technologies enabled the PM to host new Network Operations tools, which previously needed their own hardware, on the JNN server utilizing new Network Operations Management System (NOMS) software. As part of the pilot, the unit will also provide feedback to support final decisions on the NOMS capability, which simplifies how the network is managed, monitored and secured. The NOMS capability will be leveraged as part of PM Tactical Network’s wider Unified NetOps (UNO) program.

Project Manager Tactical Network delivered “prototype” Tactical Network Transport At The Halt (TNT ATH) upgrade equipment to the 1st Armored Brigade Combat Team, 3rd Infantry Division. This equipment will support a pilot that will inform the next equipment refresh for the Army’s ATH TNT equipment.
Photo by Tony Soto

The new modular equipment will be deployed in transit cases with tow handles and wheels, versus permanent shelter integration, increasing maneuverability and operational flexibility. PM Tactical Network also reduced system power requirements enabling the use of vehicle power for short-term at-the-quick-halt operations. Soldiers can simply pull over to the side of the road during convoys or relocating the command posts and rapidly power up their CPNs using vehicle power and a cable, versus having to set up a separate generator.

“These new systems will significantly improve tactical operations,” said Pfc. BJ Labrone Jones, information technology specialist for the 1st ABCT, 3rd ID. “On the battlefield, nine times out of 10 we have to improvise our plan and we need to

move, and move quickly. If we can get the network up in minutes [versus hours], it enables us to move that much faster. Being able to power the systems off of the back of one of our new Joint Light Tactical Vehicles [and other tactical vehicles] is perfect. Now we're able to move and set up right where we are and provide that needed network connectivity."

As part of the Army's TNT-MIS efforts, the unit will also pilot a new more agile and supportable version of the legacy Satellite Transportable Terminal, or STT, which the PM expects to field to the unit early next year. The STT works together with the JNN and CPN to provide network transport. To maximize efficiencies, this potential STT Modified Work Order solution will repurpose the metal frames from the legacy STTs. the prototype STT baseband equipment will also be transit case-based, versus permanently integrated onto the terminal as it is in the legacy systems. This operationally flexible solution enables Soldiers to either operate the equipment from the STT outside of the command post or move the transit cases inside and operate the system inside alongside the rest of the unit.

Project Manager Tactical Network plans to deliver an enhanced Satellite Transportable Terminal (STT) "prototype" to the 1st Armored Brigade Combat Team, 3rd Infantry Division in fiscal year 2020 , at Fort Stewart, Georgia. This equipment will support a pilot that will inform the next equipment refresh for the Army's legacy STTs.
U.S. Army Photo

In 2004, the 3rd ID was the first unit to receive what was then cutting edge at-the-halt network equipment fielded to replace outdated Mobile Subscriber Equipment, which could not keep up with the pace of battle in Iraq and Afghanistan. Fast forward 15 years, the 3rd ID is now piloting the equipment refresh, which will be the second major refresh of the originally fielded equipment. The 1st ABCT, 3rd ID is already providing input on the functionality, training and operational use of the prototype equipment.

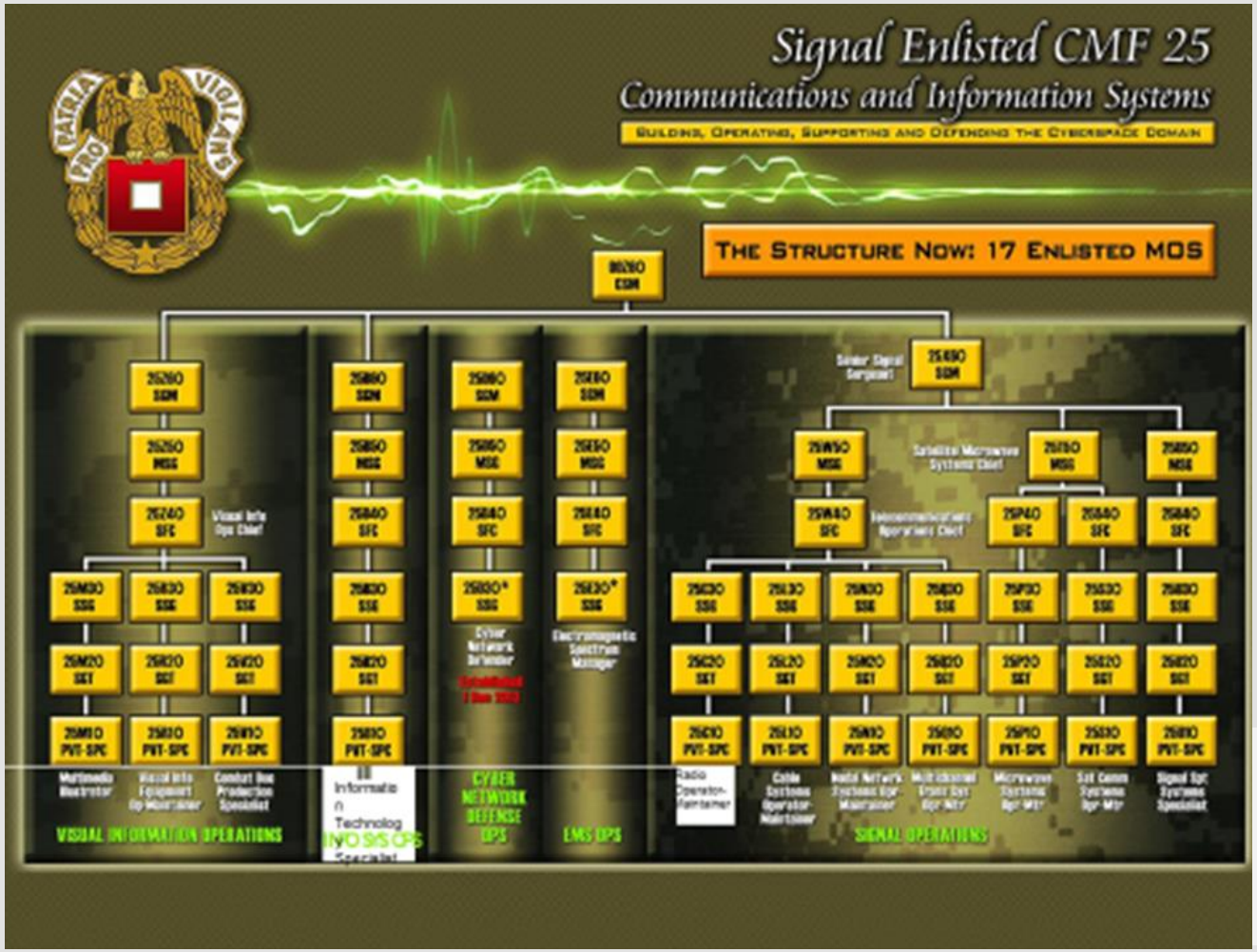
"Early user interaction uncovers real-world capability gaps and enables users to provide critical information to the PM so it can make adjustments and improvements before the systems are officially fielded to units," Allen said. "These pilot efforts help build those relationships between industry, the PM and the unit, and that is huge. It is helping to provide the network capability we need in the heat of the battle."

Enlisted MOS Convergence

Office Chief of Signal Enlisted Division

Signal MOSs provide the Department of Defense Information Network (DODIN) operations for the Army. The current Career Management Field (CMF) 25 Military Occupational Specialty (MOS) has 17 Signal MOSs that empower the Army to communicate in a congested, contested, and ambiguous multi-domain environment. CMF 25 includes five Senior Enlisted MOSs (E9) serving as Senior Enlisted Advisors to Command Teams at battalion and higher echelons. Office Chief of Signal Enlisted Division (OCOS-ED) Career Managers have been entrusted to mold the current structure of their respective MOSs to meet current and future Army requirements through MOS Convergence. CMF 25 is currently not structured to support the growing technological advances of our networks.

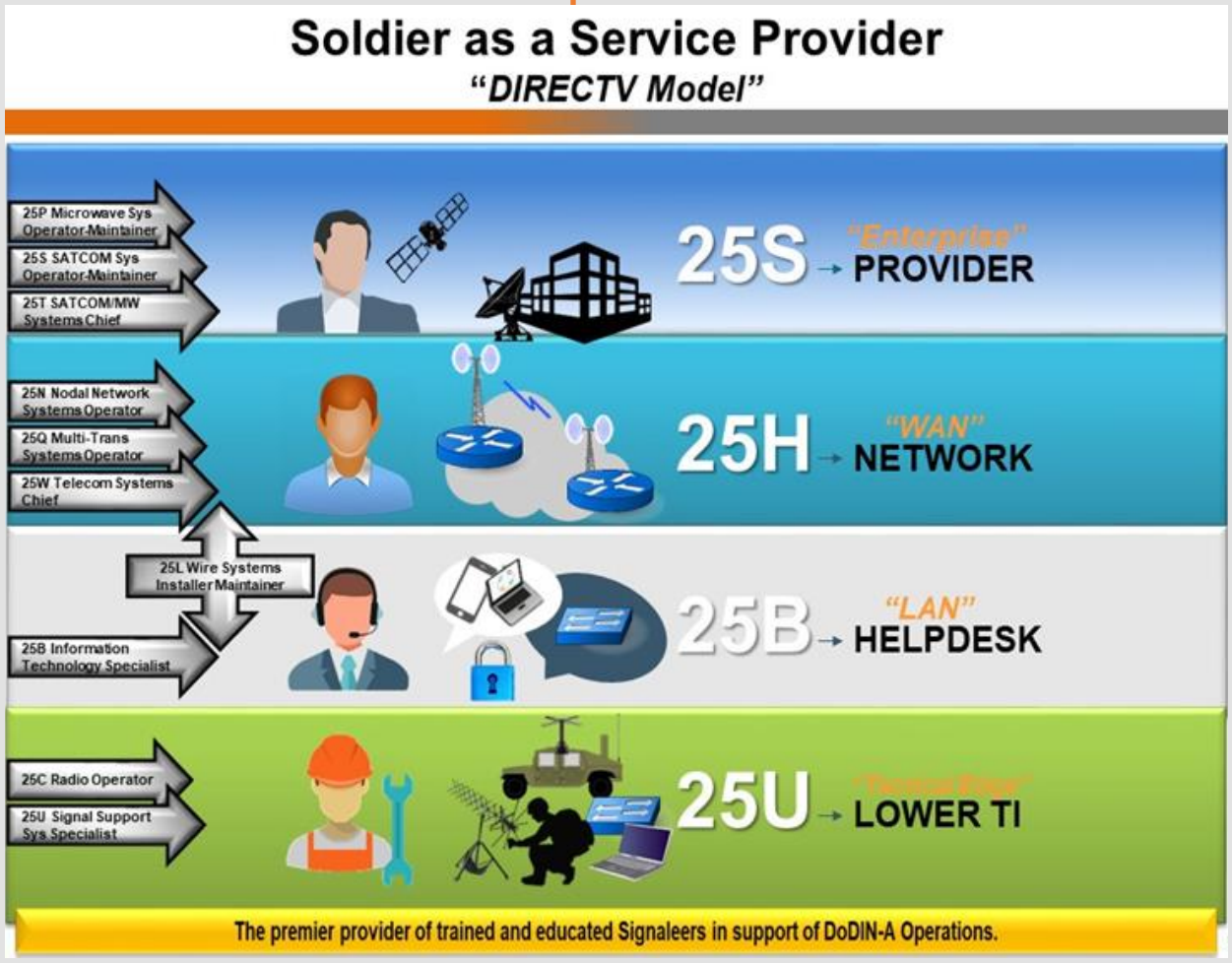
To meet the future force requirements, the Signal School has been tasked to develop a MOS convergence strategy. The CMF 25 Enlisted MOS convergence will alter the current structure of 17 MOSs to 10 focus-oriented MOSs. In a standalone action, Signal will transfer Visual Information MOSs to the Army Public Affairs Center. The end result will be a seven MOS Signal enlisted force that is multi-disciplined, optimally trained, and poised for continued success in the ever-changing operational environment. The Signal



Regiment MOS Convergence Strategy will span multiple years to meet emerging Army operational environment challenges. This strategy requires commitment and proactive involvement from senior leaders throughout the Army.

Ensuring the Signal Regiment stays in step with the speed of technology is critical. Following a basic model resembling civilian networks affords the Army the assurance that the Signal Corps can still "get the message through." This model illustrates the ability to communicate at all network levels with speed, scalability, and lethality for all mission sets.

The DIRECTV™ model (shown above) represents the Signal School's end state goal. Similar to our civilian counterparts, there are only five major areas that relate to their network. The "Enterprise Provider" is the SATCOM portion of the network. There, the transmission signal is carried from its point of origination, travels through space to reach the appropriate satellite, and back down to the end transmission device providing world-wide connectivity. "Wide Area Network (WAN) Provider" allows users to connect all services provided by the enterprise. The Information Technology (IT) Services play an integral role as they are generally the first line of support contacted when trouble arises on the network. Individuals contact IT Services to request aid and report network concerns. Soldiers that operate in the "Tactical Edge" provide baseline level support and repair tactical transmission capabilities. Visual Information personnel function between the layers of visual imagery, multimedia illustrations, audio, video and the graphic interface that is seen by the users. Collectively, these services provide connectivity for the end-item-user to remain connected in support of all DoDIN-A operations.

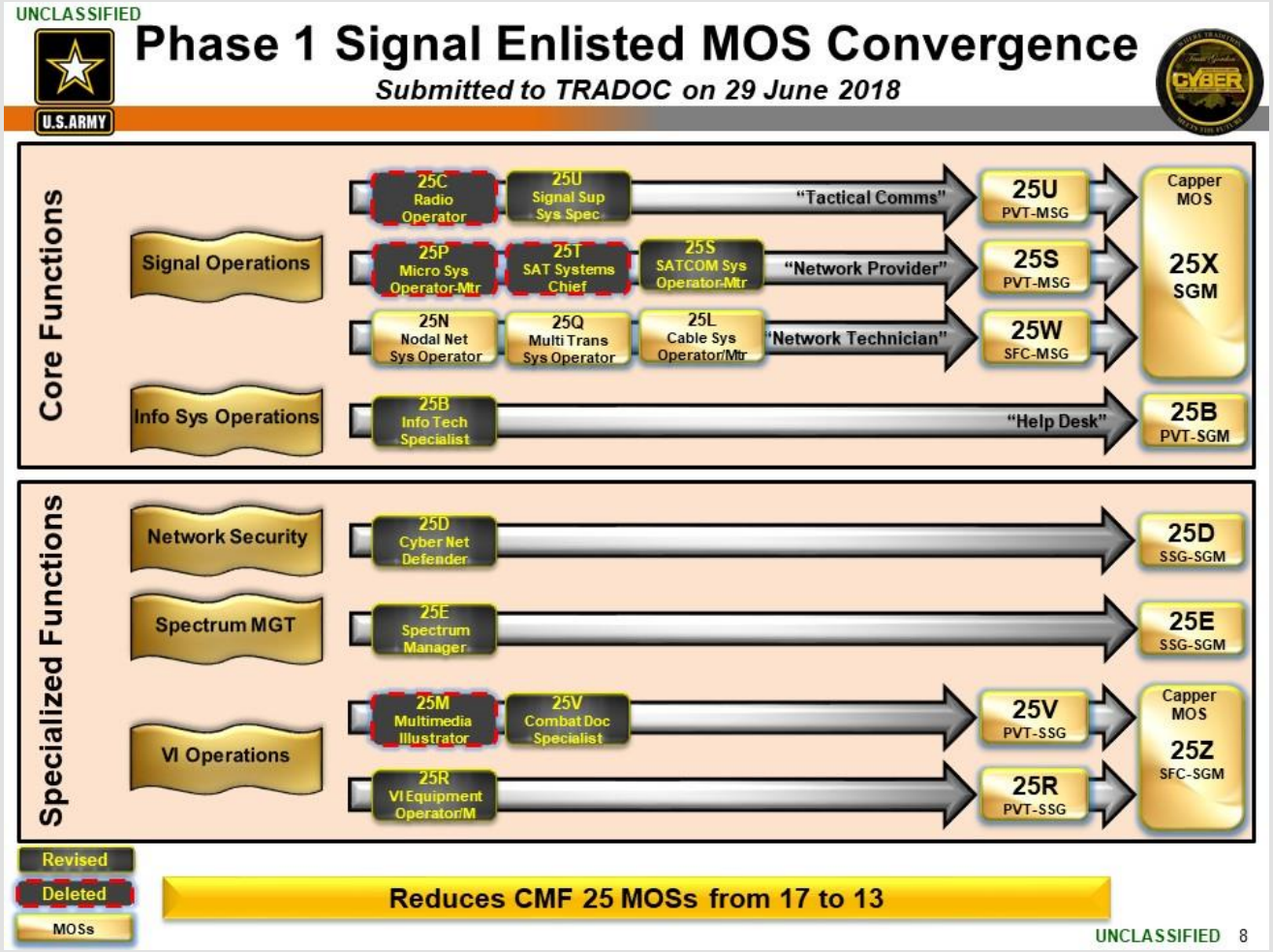


Addressing the MOS consolidation goals for the Signal Corps requires great emphasis being placed on the basic building block of the Soldier's proficiency. This is accomplished through MOS agnostic Foundational

Training and the Signal Sustainment University. The Signal School will focus on 14 areas to ensure the MOSs have a standard baseline upon graduation. This initiative will provide 80 hours of Foundational Training to each of the 10-level advance individual training (AIT) subject MOSs. Foundational Training will add 80 hours of network security and management training for a total of 160 hours of Foundational Training. The key is to reduce outdated instruction while increasing these base-line areas. This was initially implemented with the 25Bs first quarter FY18 and is now spread across all Signal MOSs.

Preceding the approval of Phase I was the stand alone action to remove the COMSEC requirement from the 25D MOS and realigned with the 25B MOS. This action allows the 25D MOS to focus on work roles that assure network/system availability, information protection, monitor for, detect, analyze and respond to anomalous network activity on Army and joint networks. This alleviates the challenge organizations have in developing and maintaining experienced COMSEC Account Managers. The Notification of Future Change (NOFC) for this action was staffed and took effect 1 October 2019 (FY20).

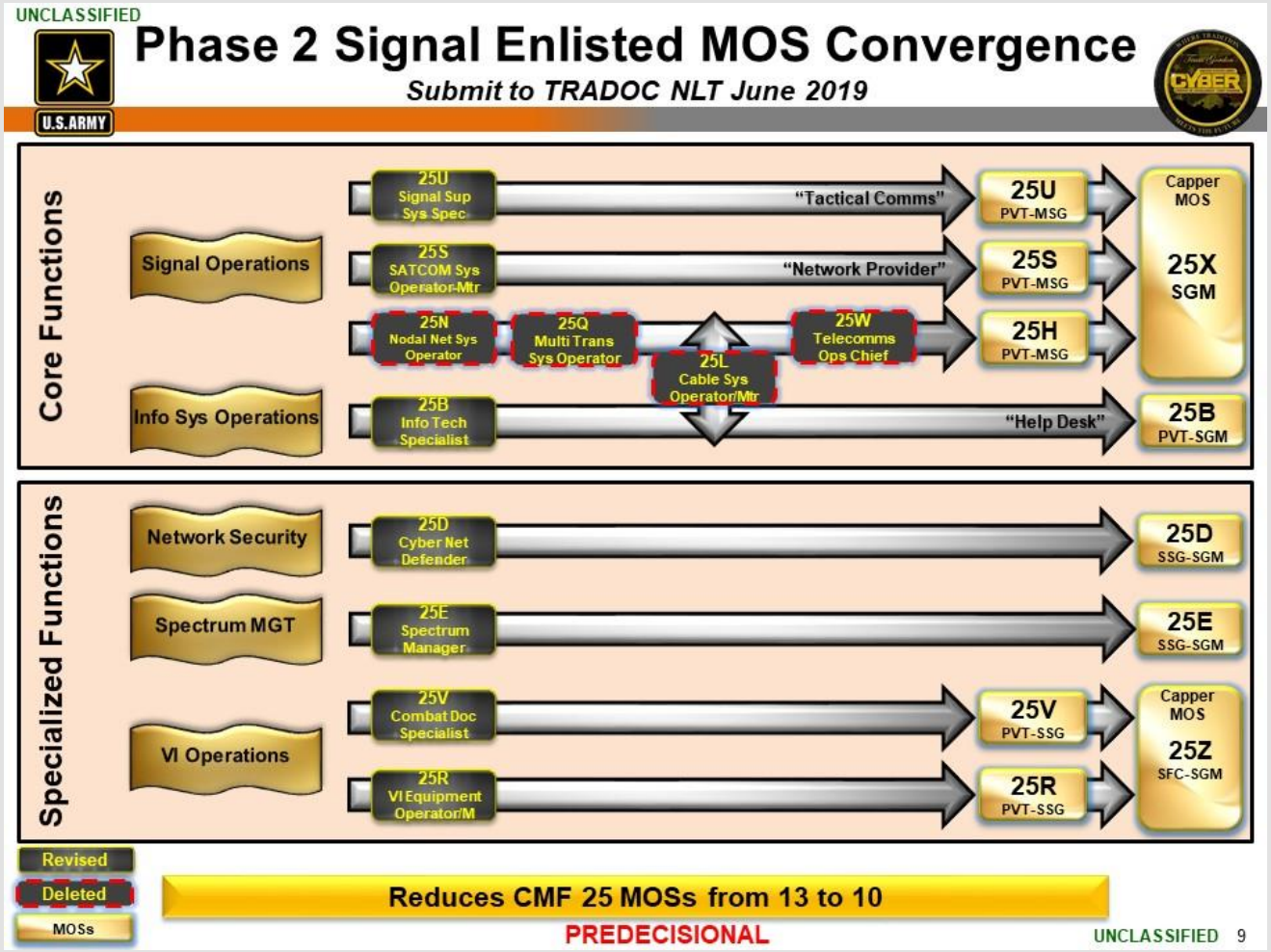
Phase 1of the MOS Convergence takes effect FY22 (1 October 2021). During that time, the current 25C MOS will be deleted, those positions will be transitioned to MOS 25U. 25P and 25T MOSs will be deleted and merged into MOS 25S. MOS 25M will be deleted and those positions will transition into MOS 25V. This transaction was submitted to TRADOC on 29 June 2018 and approved on 3 October 2019. Additional Skill Identifier T2 (Enhanced Position Location and Reporting System (EPLRS) Network Management (ENM) Enhanced Grid Reference Unit (EGRU) Operator-Maintainer Net Control Station (NCS-A)) will be deleted. For more information please see appropriate NOFC.



Focus on MOS Convergence Phase II

Office Chief of Signal Enlisted Division

Phase II of the MOS Convergence is multi-faceted. MOSs 25N, 25Q and 25W will be deleted and aligned to form MOS 25H. 25L positions will split between MOSs 25B and 25H. For example, those 25L positions in the United States Army Network Enterprise Center (USANEC) that are aligned next to the 25B positions will be changed to MOS 25B. The 25L positions that are in the Expeditionary Signal Battalions (ESB) aligned next to Joint Nodal Network Teams will change to MOS 25H. 25N, 25Q, 25L, and 25W will merge 1 October 2022 to become the 25H. This MOS is written to meet the Army's requirement to provide wide area network access to the warfighter in a contested and congested multi-domain environment. This will be done by ensuring that the necessary critical tasks associated with each of the merging MOS's are implemented into the critical task list of the 25H. 25H will be



graded from E-3 to E-8 capping at E-9 as a 25X.

Effective 1 October 2022, the 25H Network Communication Systems Specialist will supervise, install, operate and perform limited field level maintenance on commercial and tactical fiber, cabling and wiring; IP based high speed electronic nodal systems, integrated network control centers, network management facilities, associated multiplexing and subscriber interface equipment, multichannel line-of-site systems and associated relays; tropospheric scatter communications systems, tactical terrestrial satellite communication

systems, anti-jam reliable tactical terminals; communications security (COMSEC) devices, and associated equipment. Performs network management functions in support of maintaining/operational requirements, troubleshooting, and reengineering of associated network assets. Operates and performs Preventive Maintenance Checks and Services (PMCS) on assigned vehicles, power generators and equipment.

When this action is completed, a commander will need less communicators to complete the same mission more efficiently. Think about this. Looking at the most recent Army engagements where troop counts were strictly enforced, deploying a JNN with a wire crew took ten seats in an aircraft. Merging the 25H, the same mission set requires five personnel. This meets the Army's way forward by being more mobile, scalable and lethal. These savings in personnel allow for an antiquated signal force structure to adjust and develop a broader mission command scope throughout the Army.

The plan to transition the Soldiers from these four MOS's will take three to five years to fully implement; however, there are some things we do know. The new required ASVAB scores will be a minimum of 100 EL and 102 ST. All current communicators in the four merging MOS's need to look at their scores and attend the necessary training. All 25L personnel will be allowed to submit an Army Civilian Acquired Skills Program (ACASP) to become a 25B. Please see DA Pam 611-21 for 25B ACASP requirements. The 25L personnel will be required to attend 25H transition training at U.S. Army Signal School Fort Gordon, Georgia or 25H Advance Leaders Course/Senior Leaders Course at Cyber Noncommissioned Officer Academy Fort Gordon, Georgia to become MOS qualified. The 25L positions will split between 25B and 25H. Approximately 66% will move to 25H and 33% will move to 25B. This is a position count not a personnel count.

Please refer to our Milsuite page at https://www.milsuite.mil/book/groups/ocosed or contact your career manager for the most up-to-date information.

	PHASE 1 (Approved 3 OCT 19)			PHASE 2 (Pending Approval)	
New MOS	25S	25U	25V	25B	25H
Consists of:	25P/ 25S/ 25T	25C/ 25U	25M/ 25V	25B/ 25L (partial)	25L/25N/25Q/25W
Effective Date	1 October 2021			1 October 2022	
MOS Grades	E1 – E8	E1 – E8	E1 – E6	E1 – E9	E1 – E8
Capper MOS:	25X (E9)	25X (E9)	25Z (E7 – E9)	N/A	25X (E9)
ASVAB Requirement	EL - 107	EL – 95 SC - 95	EL – 95 ST - 95	ST - 95	EL – 100 ST - 102
ASVAB Waiver	N/A	N/A	N/A	25L - 5 pt	25L/N/Q – 5 pt
Transition Training	Yes	No	Yes	No – 25B Yes – 25L	No - 25N/Q/W Yes – 25L
Transition ASI	25P to 25S ASI Y2 25S to 25S ASI Y3	N/A	25M to 25V ASI Y2 25V to 25V ASI Y3	25L to 25B ASI Y2	25L to 25H ASI Y2
Transition Period	1 Oct 21 – 30 Sep 24 (Active Duty) 1 Oct 21 – 30 Sep 26 (ARNG & USAR)			1 Oct 22 – 30 Sep 25 (Active Duty) 1 Oct 22 – 30 Sep 27 (ARNG & USAR)	

KNOW YOUR TECH

Local Administrator Password Solutions

CW3 Phillip A. Dieppa
US Army Cyber Center of Excellence

Credential management is something that every IT administrator must handle. Small, ad-hoc environments are less likely to require solutions that scale. Medium to large organizations require more thoughtful solutions. Consider the Brigade Combat Team (BCT) for this example. BCT's typically operate upwards of 500 workstations on a single network at any point in time. Most of the workstations are joined to an Active Directory server where they gain access to networked resources and services. Those workstations also have local administrator accounts that typically store a decentralized and unmanaged username and password.

Administrators previously leveraged a feature called Group Policy to manage the local administrator account. Group Policy is used to make rapid changes to the behavior of workstations and users in a domain. Group Policy was the primary way to manage local administrator passwords within the domain. Microsoft disabled managing passwords using Group Policy objects in May 2014 when they published security bulletin

LAPS Settings

The Local Administrator Password Solution (LAPS) provides the ability to automatically update local administrator account passwords for domain joined computers.

General Settings

Installed	True
Enabled	True
DLL File Location	C:\Program Files\LAPS\CSE\AdmPwd.dll
DLL Version	6.2.0.0

Policy Settings

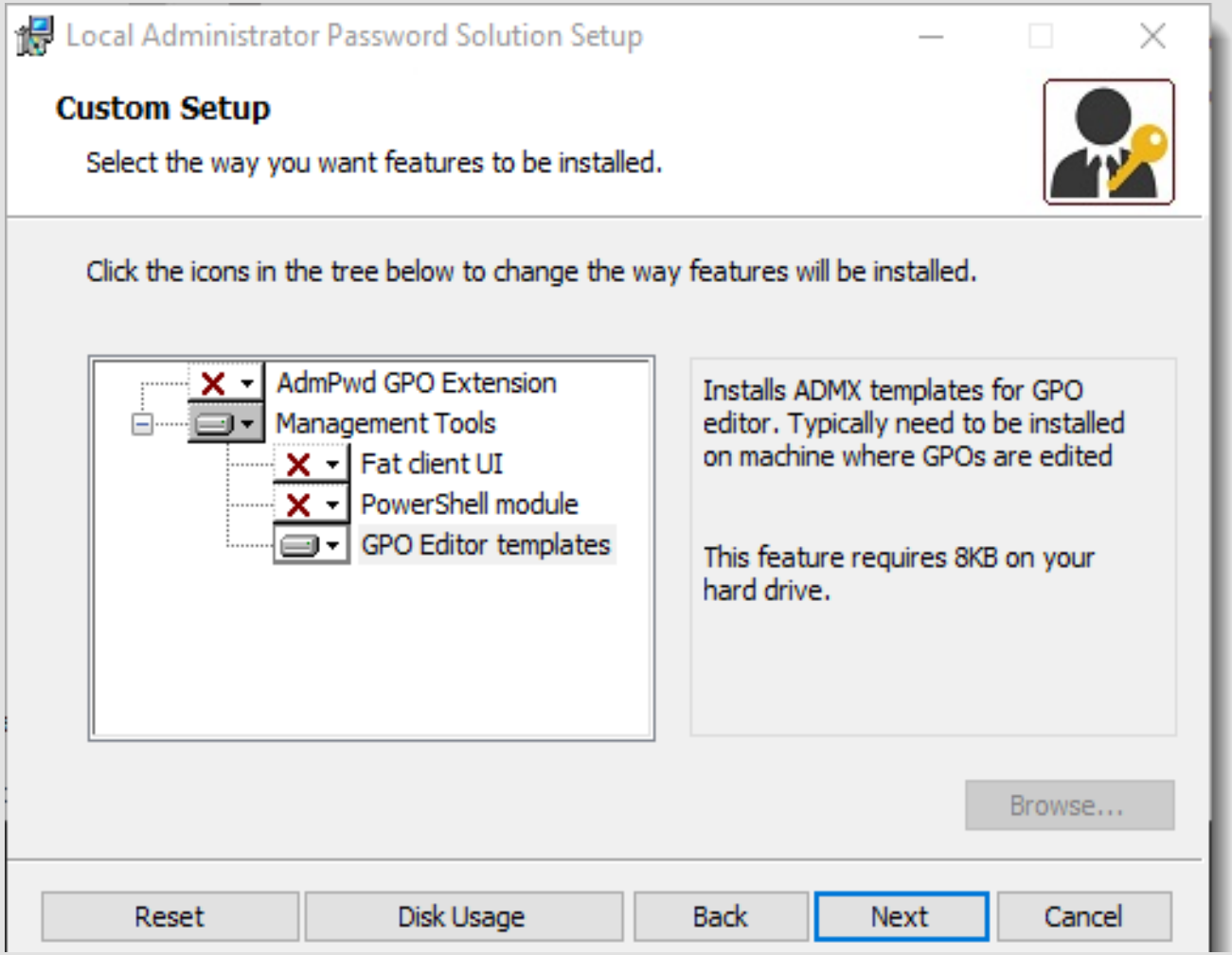
Administrator Account Name	
Password Age (Days)	30
Password Length	14
Password Expiration Protection Enabled	True
Password Complexity Type	Large Letters + Small Letters + Numbers + Specials

MS14-025. The security bulletin addressed that passwords for user accounts, mapped drives, scheduled tasks, services, and data sources were stored in plain text.

Microsoft released a solution in May 2015 that simplified the struggle of managing local administrator accounts. They developed the Local Administrator Password Solution (LAPS) which enables workstations to create different and randomized passwords for the local administrator account. Additionally, LAPS allows domain administrators to control who is able to interact with the LAPS feature.

LAPS has several key benefits over the primitive way administrators previously managed the local administrator account. A LAPS agent is installed on the workstation that performs several actions. The agent checks Active Directory for password policies and also performs updates to Active Directory when passwords need to be changed. The passwords for each machine are stored in Active Directory using a confidential read-only attribute that is controlled by a security group. The agent on the workstation performs the password rotation and securely updates Active Directory. LAPS administrators may also trigger an ad-hoc password rotation or they can schedule regular password rotation intervals which can be set to rotate as early as once per day.

LAPS is a game-changer for Microsoft enabled networks, especially in the BCT. The solution is freely available from Microsoft and can be deployed within a BCT in under an hour. This solution could be the first line of defense between an adversary gaining local access to the network or elevating to a domain administrator.



Preparing to Jump

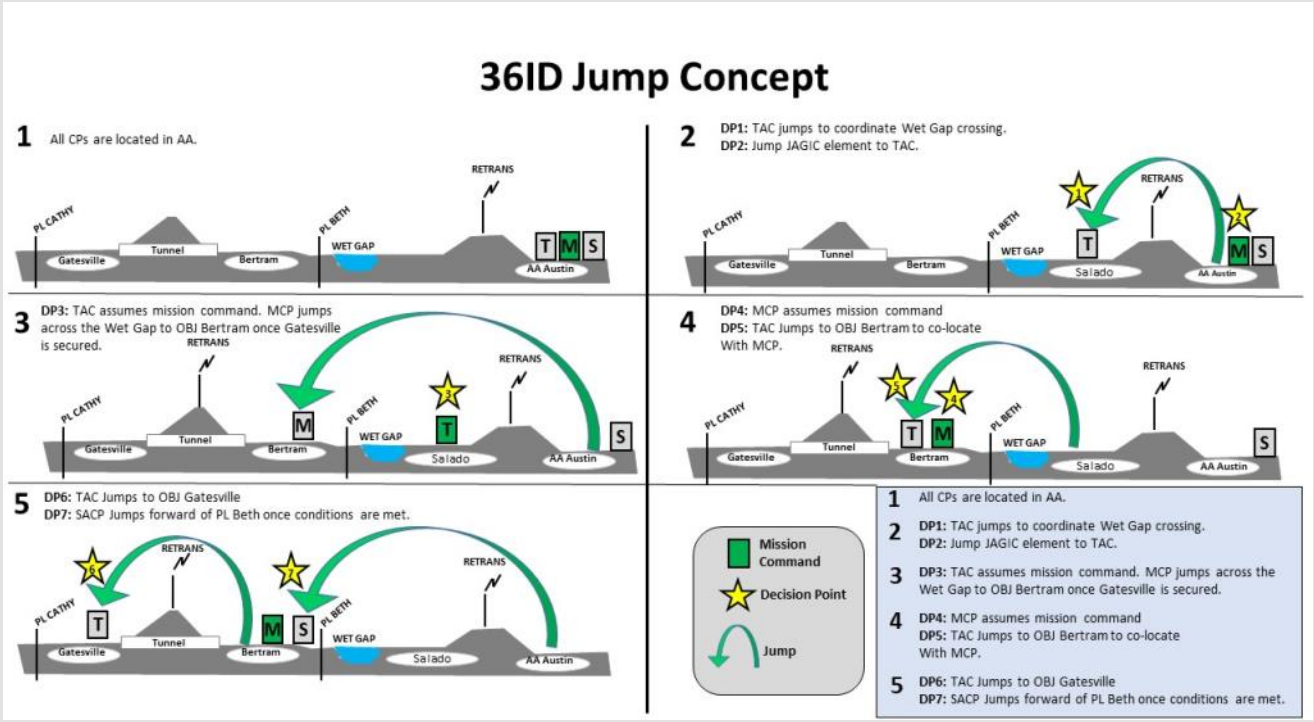
Integrating Mission Command and Mobility into Warfighter Planning

Lt. Col. Chris Winnek &
Cpt. Morgan Snody
Texas National Guard 36th Infantry Division (36ID)

Current doctrine calls for Divisions to deploy three command posts: Division Main Command Post (DMAIN), Division Tactical Command Post (DTAC) and Division Support Area Command Post (SACP). This concept deviates from the current Modification Table of Organization and Equipment (MTOE), which provides personnel and equipment for two command posts: DMAIN and DTAC.

This change presents both challenges and opportunities to units as they prepare for a WFX. The challenge is figuring out how to realign authorized equipment and personnel to cover down on an additional command post. The opportunity lies in having to think outside the box, look at the mission requirements of each command post, and develop a support concept that focuses on mobility and speed. To accomplish this, units should minimize their digital footprint and consolidate communications equipment and other staff functions onto wheeled platforms when possible.

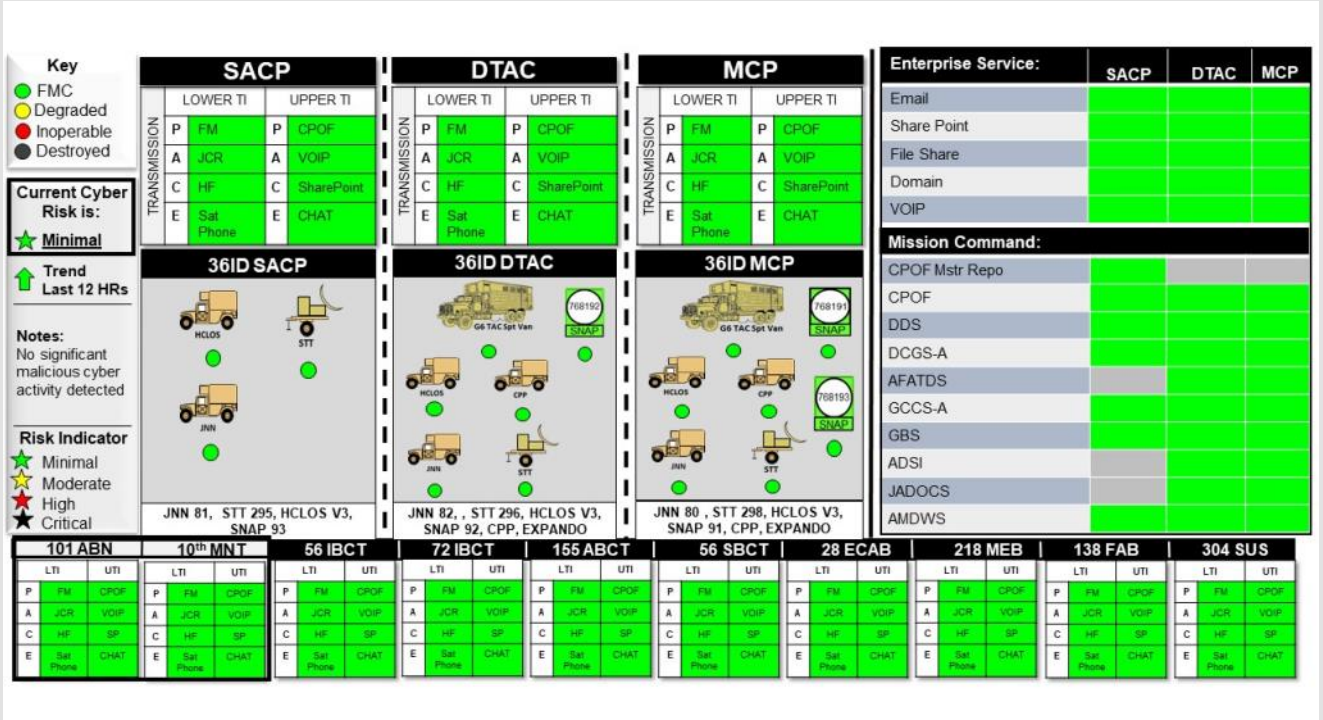
Critical requirements of mission command systems are the availability of reliable power, air conditioning, and ground space for the placement of antennas. Whenever possible, the orientation of command posts should consider the required azimuths and placement of satellite and line-of-sight (LOS) antennas. G6 participation in site reconnaissance is critical to ensure that command posts are set up in supportable locations and directionally oriented to



maximize the capabilities of unit communications equipment.

Expandable van shelters provide rapidly deployable platforms to house command post server stacks. These rolling data centers are the ideal platform to rapidly deploy powered and air-conditioned space for command post servers and Network Operations. They also provide a transport platform for signal equipment during jumps.

Dedicated power to G6 equipment ensures proper power up or shut down independent of command post set up and teardown activities. Segmenting the power grid expedites set up and tear down during jumps while minimizing risk to critical data and system configuration loss. A dedicated 30K generator at each command post can provide power for server and network operations. This allows the G6 to control power and air conditioning availability to servers and network operations independent of the status of the supported command post. The Joint Network Node (JNN), High Capacity Line Of Sight



Mission Command Estimate

(HCLOS) and Satellite Transmission Terminal (STT) should also be isolated from the command post power grid to allow the crews to control power availability to their systems.

Establishing a Primary, Alternate, Contingency and Emergency (PACE) communications plan for both upper tactical internet (TI) and lower TI systems is essential to maintain mission command with all echelons throughout operations. Divisions and brigades have various communications systems available so it is important for the Division G6 to formalize the primary, alternate, contingency and emergency means of communication for the operation.

The 36ID used a Mission Command Estimate (MCE) to update the Commanders and staff on PACE system status from command posts at all echelons to each division command post. As systems become inoperable due to technical faults or conditions on the battlefield, the MCE tracks which systems are available to communicate to each unit. In addition to PACE information, it contains the status of the Division's communications equipment, available services and current cyber threat analysis.

The Division's PACE for the exercise leveraged a JNN, STT and HCLOS at each command post to establish the upper TI network. The Unit Hub Node (UHN) was not used in order to maintain a small digital footprint. We repurposed those operators to supplement the additional manning requirements of the SACP. The Division leveraged a combination of FM and HF radio base stations with TOCNET radio over internet protocol systems, Joint Capabilities Release (JCR) situational awareness software, and iridium satellite phones to provide the lower TI connectivity.

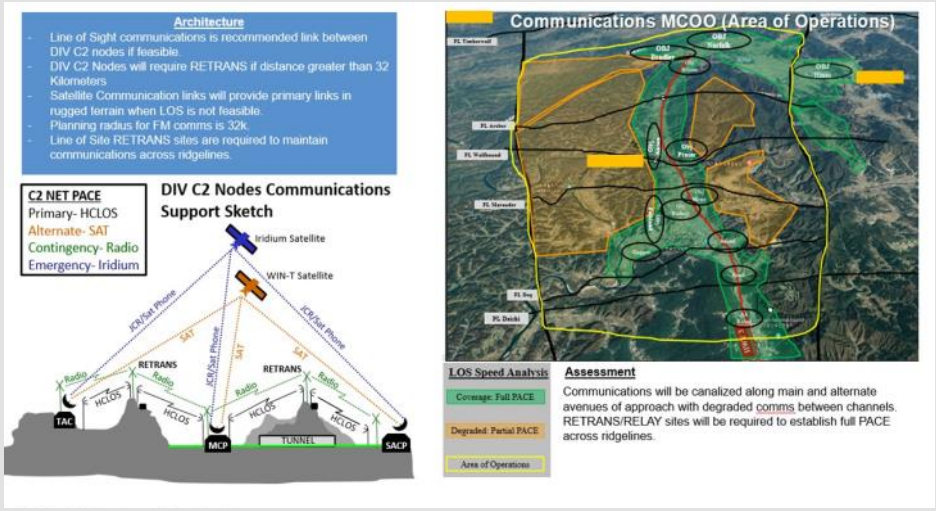
Developing the Division's jump concept prior to the Combined Arms Rehearsal (CAR) was critical to 36ID success during the exercise. The Commander's concept on how to deploy the DTAC is key to determining when, where and why a command post will jump. 36ID's concept designates the default location of the DTAC to be co-located with the DMAIN. The DTAC jumps to provide enhanced coordination of the close fight or to maintain mission command while the DMAIN is jumping. All command post jumps are designated as decision points and validated during course of action development, war-gaming and in the combined arms rehearsal.

As the lead brigades extend forward on the battlefield, the DTAC jumps forward to provide a forward Division node to push the Division's line-of-site communications reach forward and enable enhanced coordination for critical close fight operations such a wet gap crossing. Once conditions to jump the DMAIN are reached, a Joint Air Ground Integration Center (JAGIC) element from the DMAIN jumps to the DTAC and establishes operations to coordinate fires while the DMAIN jumps. The DMAIN then executes a Mission Command handover to the DTAC and immediately jumps to a pre-designated location as far forward as feasible. As soon as the DMAIN is operational, the DTAC executes a mission command handover to the DMAIN and jumps forward to co-locate with the DMAIN. The JAGIC element rejoins the DMAIN and the DTAC prepares for its next jump forward during the next phase of the operation.

The decision to jump the SACP centers on keeping the Division's lines of communication as short as possible and to set conditions to hand over battlespace within the Division's consolidation area to Corps.

The success of any unit depends on the planning and coordination between the Commander, operations team, planners and the signal support team. Implementing a three command post structure utilizing the MTOE of a division headquarters designed for two command posts requires even more coordination and planning.

Keys to 36ID's success were developing a jump concept, designing command posts for mobility and speed, and establishing a comprehensive PACE plan and integrating the G6 staff into the warfighter and operational planning process.



The Signal Corps Command Post Fleet during WWII

Part 1 – Acquiring the Ships

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Seventy-five years ago, the largest concentration of warships and naval assault craft ever assembled in the Pacific Ocean sailed into Leyte Gulf. Located in the heart of the Philippine archipelago, Leyte was the point where the Southwest Pacific Area (SWPA) forces of General Douglas MacArthur would converge with the Central Pacific forces of Admiral Chester Nimitz to wrest the Philippines from the hands of the Japanese. The Leyte landings were the largest joint operation to that date and demonstrate for today's military professionals an excellent example of multi-domain operations and large scale combat operations for the 21st Century.

On October 20, 1944 over 100,000 Soldiers of the US Sixth Army assaulted the Leyte beaches. Often overlooked in the armada of over 700 ships were five little vessels specially designed to provide flexible and redundant communications capabilities for Army commanders during the crucial period of invasion. This little fleet within a fleet existed because of the innovation of Signal Corps officers who sought to solve the challenges of communicating over thousands of miles in the ground, air and sea domains.

Maj. Gen. Spencer B. Akin (2nd from left) with Signal Team aboard FP 47
Maj. Gen. Spencer B. Akin Collection, Signal History Office

Maj. Gen. Spencer B. Akin, the chief signal officer of SWPA, established the Seaborne Communications Branch (SCB) on March 21, 1944 and staffed it with officers with maritime backgrounds and technical understanding about communications during amphibious operations. The SCB was to acquire and prepare several vessels to serve as floating command posts during amphibious operations. That was not an easy task; shipping was scarce, and finding vessels that could accommodate the technological needs of modern communications was a challenge.

In March 1944, officers of the SCB arrived in Sydney, Australia to survey ships for conversion to radio relay vessels. There they found a 114 foot wooden, 370 ton ship named the *Freight Passenger (FP) 47*. The Signal Officers

agreed it was a suitable vessel and had it signed over to them for conversion. They built an operations room and installed Australian manufactured transmitters and receivers along with several Signal Corps sets. Two 15-kilowatt diesel engines provided power generation. The Set, Complete Radios (SCR) were all VHF with capability to provide 24 hour naval convoy communications, the CP fleet FM net, and ship-to-shore communications. For armament, the *FP 47* was fitted with two 20-millimeter anti-aircraft guns and two .50-caliber machine guns. A Signal Corps first lieutenant and 12 enlisted men comprised the communications operations and maintenance team. A crew of six Army Transport Service (ATS) officers and 12 enlisted men were assigned to operate the vessel and weapons stations.

On June 6, 1944 the *FP 47* left Australia for Hollandia where ships, men and material were being assembled for the Philippine invasion. Immediately upon arrival the ship and crew were pressed into service to open circuits to SWPA HQ at Brisbane, Australia, and the advanced SWPA HQ at Port Moresby, New Guinea. During this period, the *FP 47* handled an average of 7,000 – 11,000 code groups per day. On Sept. 7, 1944, the *FP 47* departed Hollandia for Biak where additional communications were needed. At Biak, a code-room was installed and the *FP 47* went into operation as a floating Signal Center. When the Biak operations ended the *FP 47* was ordered back to Hollandia to join the ships assembling for the Leyte invasion.

By early 1944, the SWPA Public Relations Office was swamped with complaints by American war correspondents about the delays in getting timely news stories to US media. The Public Affairs Officer took this problem to Maj.

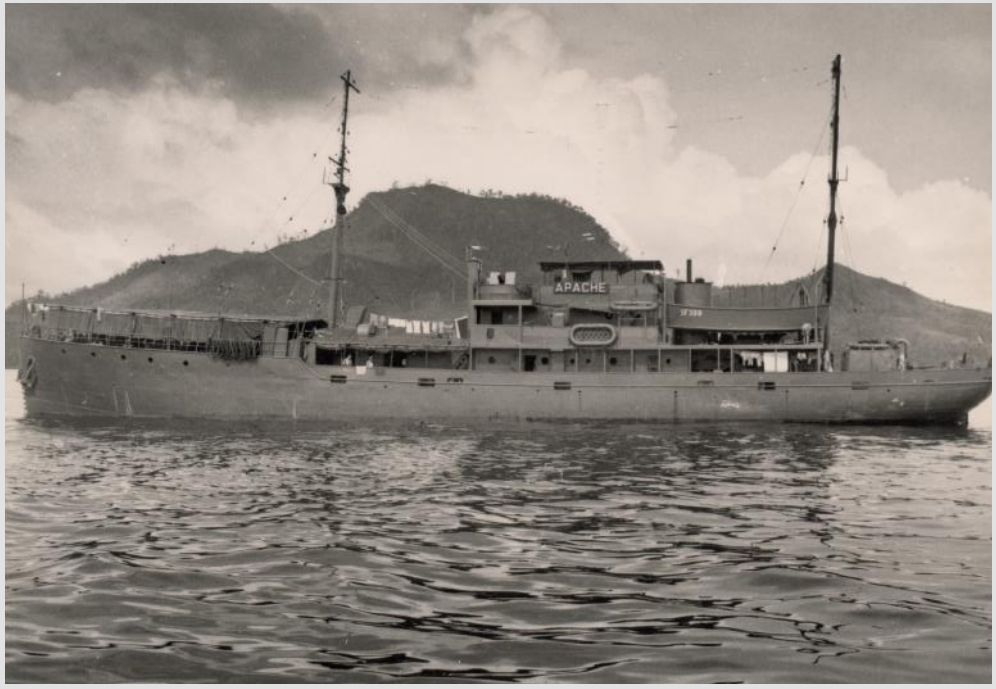
Freight Patrol (FP) 47
Maj. Gen. Benjamin H. Pochyla Collection, Signal History Office

Gen. Akin and asked if it was possible to design a ship as a floating broadcast studio so the media could quickly communicate with their offices in the US. Akin put the SCB on the task and the result was a floating broadcast station with a studio to accommodate and transport correspondents during amphibious operations.

The media broadcast ship *Apache* was an old 19th century revenue cutter. To provide long range transmission capability, the SCB technicians installed a 10-killowat voice-modulated transmitter which could reach as far as the U.S. and two 50-kilowatt diesel engines for power. There was a VHF room for an FM transmitter and receiver connected to telephone and telegraph carrier equipment to provide three voice and two teletype channels for a shore link. The most impressive feature was the studio and control room configured to mirror those used by the networks in the U.S. The studio was separated from the outer ship wall on all sides by two-inch thick rubber pads and was carpeted and soundproofed to suppress the ship's vibrations.

The *Apache* was armed with two 20-millimeter anti-aircraft guns. The Signal Corps detachment was led by two first lieutenants and a second lieutenant who had been broadcast engineers in civilian life. There were 11 enlisted men, six of whom were VHF specialists. Like the *FP 47*, the ship's crew was composed of seven ATS officers and 12 enlisted men. By the end of September 1944, work was still in progress on the *Apache*. Although not fully completed, she too was ordered to sail to Hollandia to join the invasion fleet.

In early 1944 the US Navy agreed to provide larger ships to serve as seaborne command posts. These ships were called *Patrol Craft Escorts* (PCEs) and had been designed to defend convoys and with enough room to accommodate up to 86 survivors from ships that had been damaged or sunk. Each PCE had a speed of up to 16 knots and armament consisted of a 3-inch gun, two 40- millimeter, six 20-millimeter, four .50-caliber anti-aircraft guns, and several systems to employ depth charges against submarine attack. In addition, all of the latest navigation, ship locator, and fire direction equipment were incorporated into the vessels. Crews consisted of nine US Navy officers and 95 enlisted men to operate the vessels.



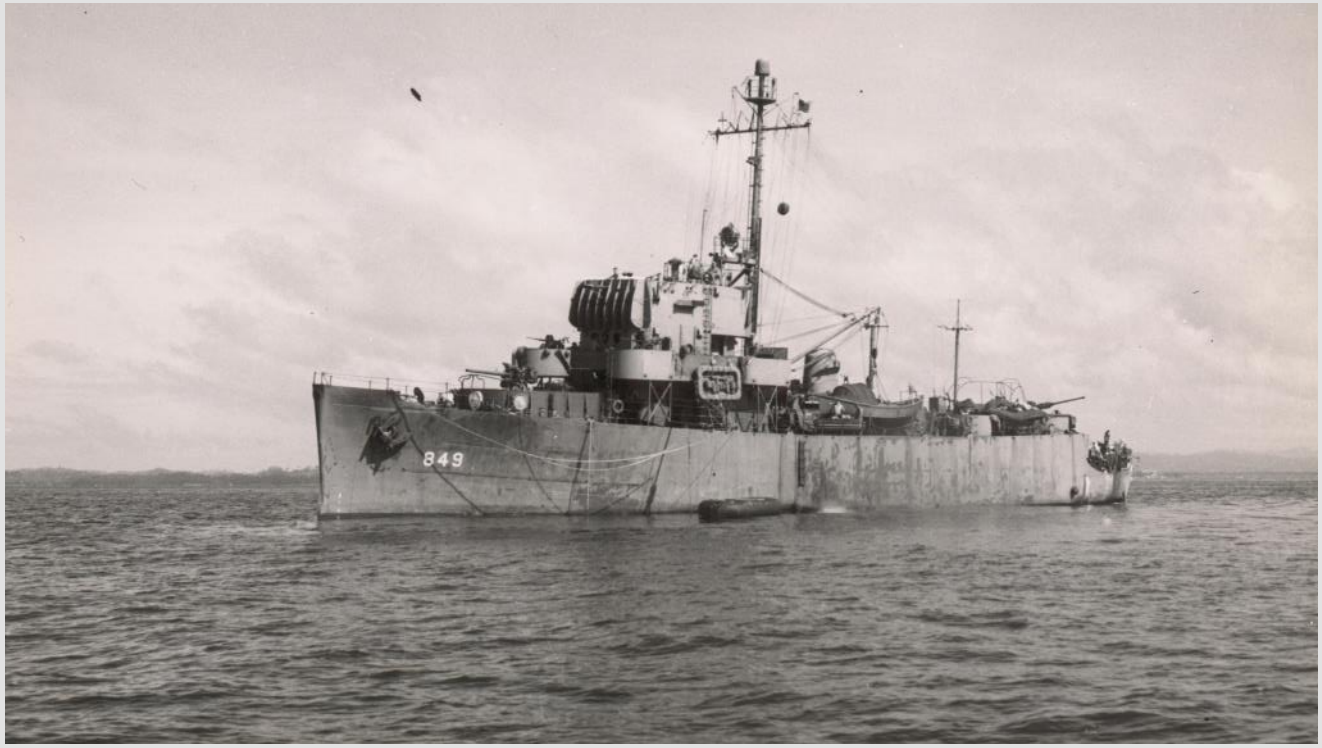
Media Broadcast Ship Apache
Maj. Gen. Benjamin H. Pochyla Collection, Signal History Office

Once the ships arrived in Australia in June 1944, the Signal Corps began converting them to CP ships - two for the

SWPA GHQ (848 and 849) and one for the HQ Sixth Army (850). Common to all PCEs were several high-power Australian transmitters and receivers. In addition there was a code room and compartment fitted as a general officer's quarters. After that, each PCE was outfitted with equipment tailored for either Theater GHQ or Army HQ missions.

The SWPA GHQ ships – PCEs 848 & 849 – each had three Australian transmitters and two VHF radio sets with carrier equipment for three voice and four teletype channels. In addition an SCR-284 transmitter and receiver for voice or continuous wave and an SCR-300 were installed for ship-to-ship and ship-to-shore links. To conduct signal operations were a radio officer and a cryptographic officer; nine radio operators, three teletype operators, three VHF specialists, four signal center and code clerks, two transmitter maintenance specialists, and one teletype maintenance specialist.

Because PCE-850 functioned as the Sixth Army HQ



Patrol Craft Escort (PCE) 849, SWPA GHQ Ship
Maj. Gen. Benjamin H. Pochyla Collection, Signal History Office

CP, no VHF and carrier equipment was installed. For ship-to-ship and ship-to-shore communications the 850 had three SCR-160s, six SCR-300s and a teletype with a mile of rubber-covered cable on deck to run onto shore when possible. The signal team consisted of one warrant officer and 12 enlisted men. As fast as they were equipped and staffed, the PCEs sailed north to Hollandia to join the *Apache* and *FP 47* as part of the Leyte invasion fleet.

At Hollandia, the Signal Corps CP fleet was designated Task Unit 78.1.12 (Army HQ Craft). In addition, there were several Navy command ships shared by senior Army and Navy leaders, the *USS Nashville* with General MacArthur and the *USS Wasatch* with the Sixth Army Commander, General Walter Kruger. From those ships, MacArthur and Kruger could command ground forces during the assault landings through the PCE ships assigned to each organization.

Next issue: The CP fleet during operations and combat during the invasion of Leyte.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